

Lester Jones
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Portfolio



Lester Jones

The UX
Researcher/Designer
with Expertise in
Informing Results
Delivering UX
Efforts for Large
Impactful
Systems.

www.lesterajones.com

Academics

2021 - Graduate Certificate - Cyber Security
Harvard Extension School

2009 - Masters - Information Architecture and
Interaction Design
University of Baltimore

2005 - AAS - Computer Information Systems
Baltimore City Community College

2000 - B.Sc. - Zoology and Botany
University of the West Indies

Special Sauce

- Experience Leading Nation Spanning Ethnographic Studies
- Expert in Generative UX Research Methods
- Experience working with Large Scale Systems that Impact Millions of Users
- Experience with both UX Research and UX Design Methods
- Professional Photographer, Drone Pilot and Overlander
- Experience working in Confidential Environments
- Strong Science Background



Multi-factor Authentication

Implement Multi-factor Authentication for the Social Security Administration
to Improve Account Access Security for 50 Million Online Account Holders

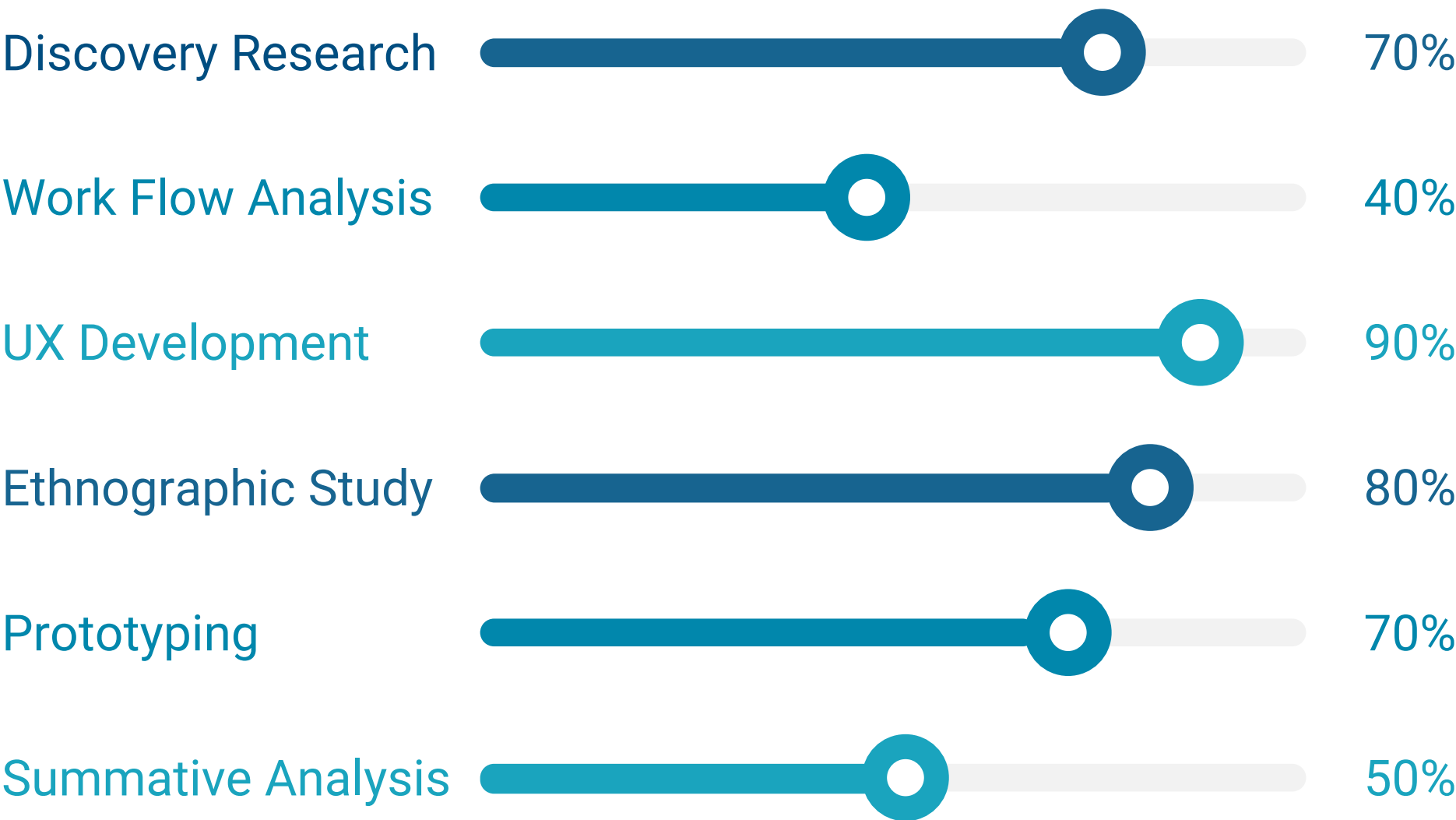


Role: UX Lead

UX Team Size: 3

Project Management: Agile

My Contributions



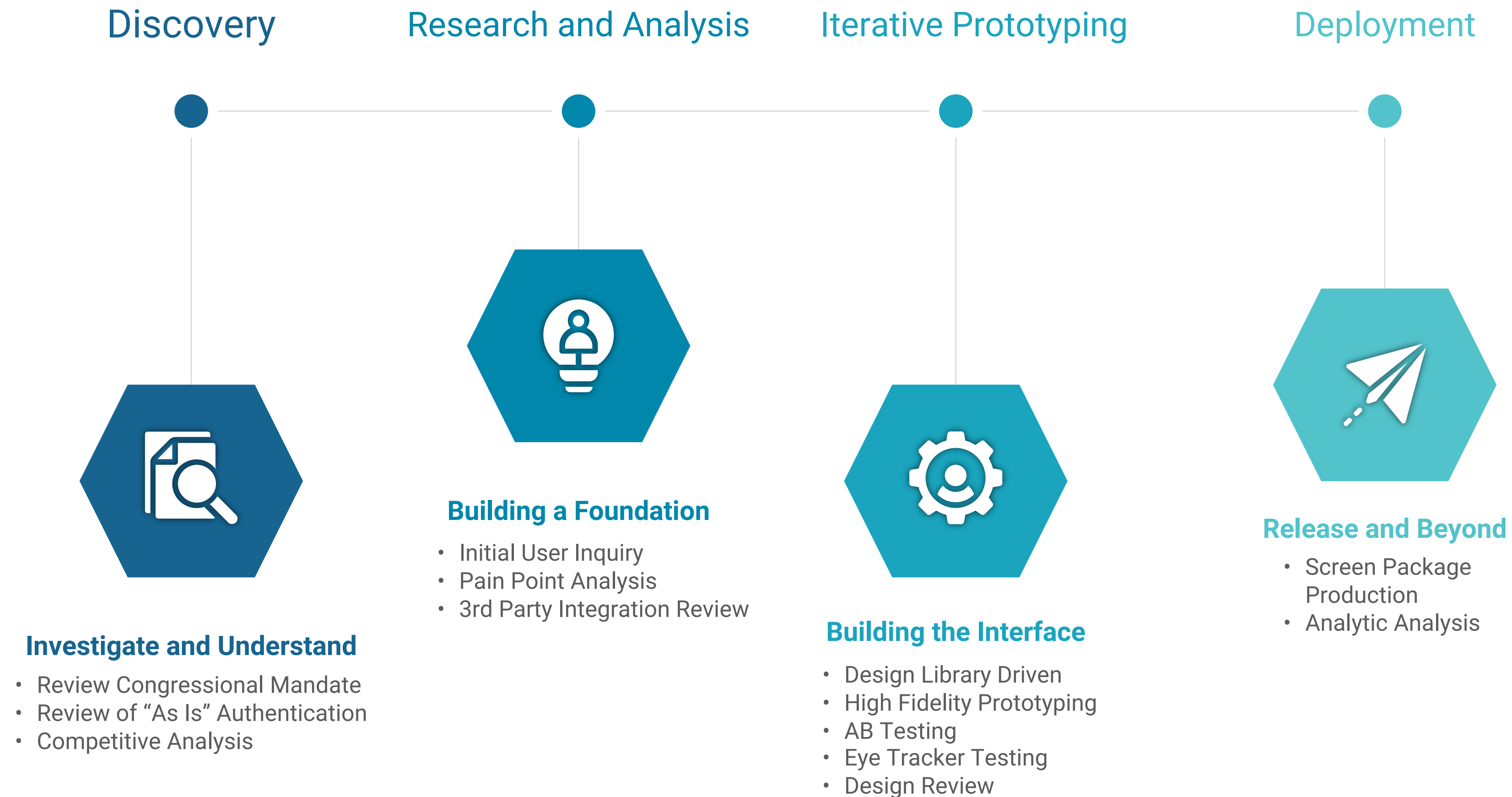
Tools:

axure

mach⚡form
Est. 2007

balsamiq®

The Design Process



01

Discovery

The preliminary phase in the UX-design process that involves

- Conference with the Product Owner
- Researching the problem space
- Framing the problem to be solved and determine the scope
- Gathering enough evidence and initial direction on what to do next

Discovery

Congressional Mandate

Dive Deep

This effort was driven by federal government's 400 million dollar IT Modernization Program that aims to improve security and capacity of the U.S. Government IT Systems. This document was reviewed and used for over arching guidance centered around the following:

- Implementing more Secure User Access with a Second Factor
- Ensuring a pathway for Future Improvements
- Ensuring IT improvements have a fall back mechanism
- Ensuring Systems have Self Help Mechanisms



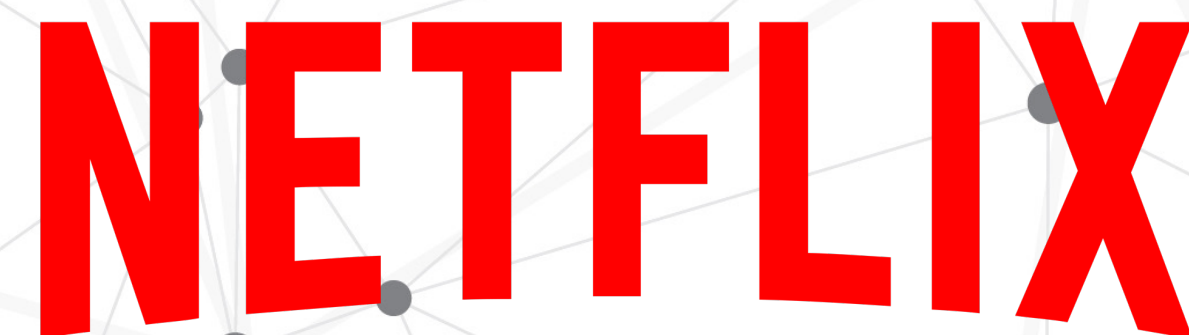
Discovery Comparative Analysis

Invent and Simplify

Comparative Analysis was done to survey the best authentication practices of the leading web services providers.

Special Notice was taken of the following:

- The General Authentication Workflow
- Error Recovery
- In System Tool Tips
- Notifications sent to the the users
- Success and Failure Messages

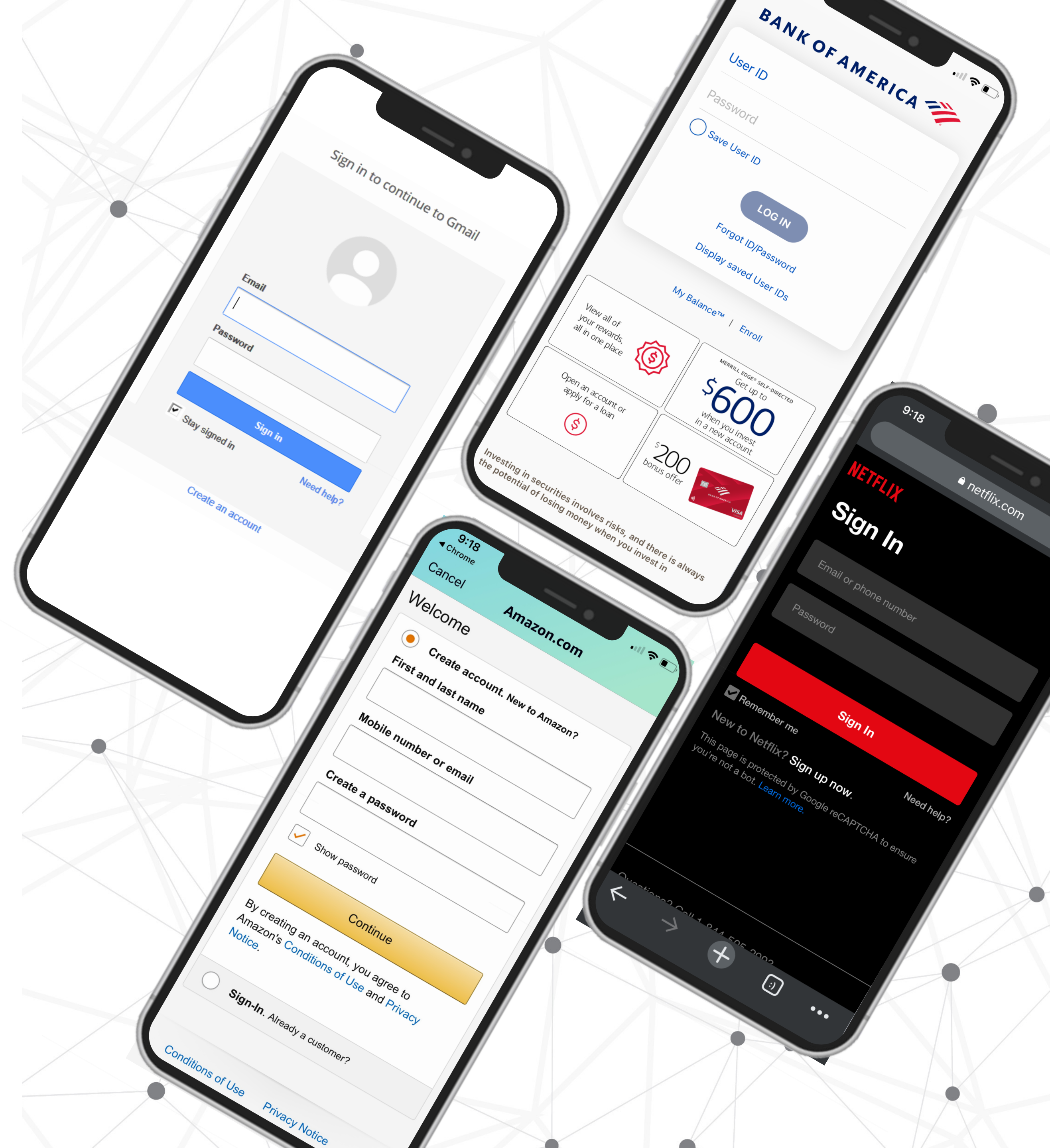


Discovery Comparative Analysis

Invent and Simplify

A review of the current Second Factor Implementations revealed the following

- Next Steps are clear
- Error messages are close to the point of error
- Users are given a choice of multiple Authentication methods
- Error Reversal is available
- Key fields have dynamic masking to catch errors before submission



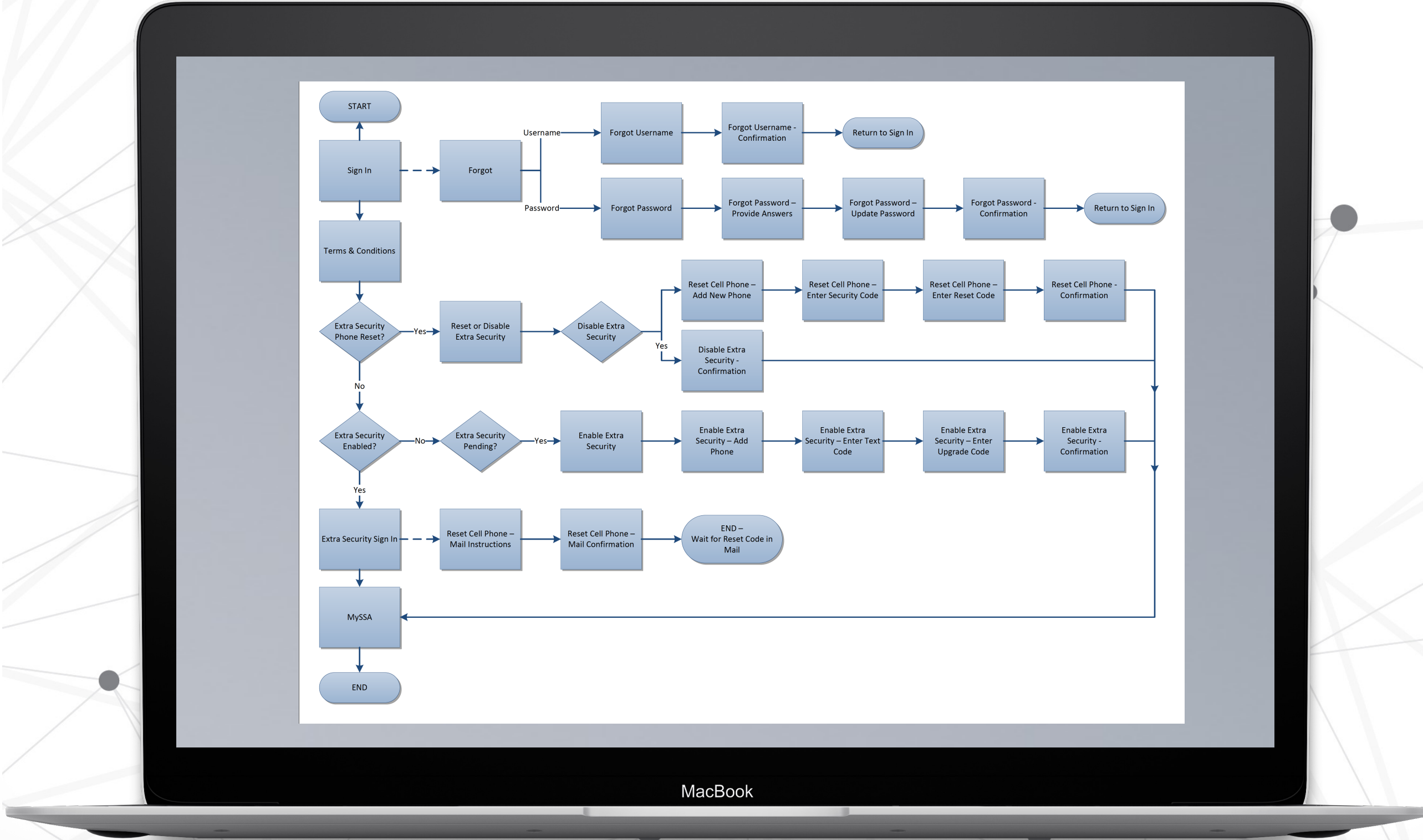
Discovery

“As Is” Workflow Mapping

Dive Deep

The current Authenication pathway was mapped and used a foundation for the upgrade effort.

Mapping included the “Happy Path” and Error Exceptions.



02

Research and Analysis

After the Product and Project Scope and the Desired Outcomes are determined, Research and Analysis is done to determine the specific next steps need to insure the success of the overall effort.

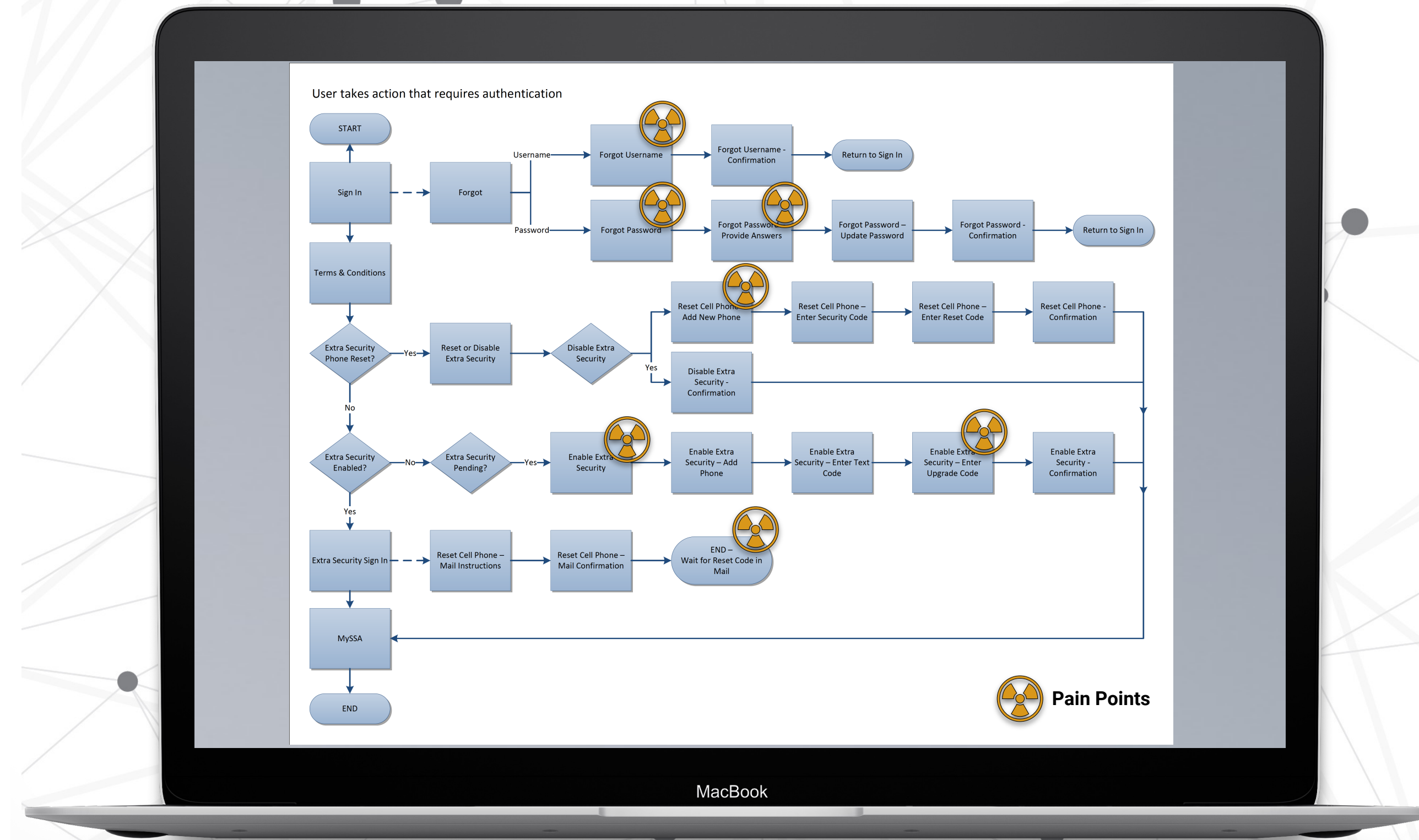
Research and Analysis

Pain Points

Customer Obsession

A user inquiry was conducted to determine the pain points that users were having with the **Current Interface**.

1. Forgetting their usernames/passwords
2. Registered email address can be inaccessible
3. Forgot the answers to their security questions
4. Users largely choose not to add “Extra” security
5. Customers visited SSA field offices for relief





Research and Analysis

Initial User Inquiry

After the initial user inquiry with 61 SSA customers in the MD/PA region, the UX Team suggested offering **email as the second factor first**. The PO Team decided on using cell phone numbers. The risk was documented and presented to the PO Team.

- Challenge
- Customer Obsession
- Dive Deep

Research and Analysis Risk Mitigation

Challenge

Customer Obsession

The Product Owner Team decided to proceed with a **“Cell Phone First”** Second Factor strategy.

A risk document was prepared this included the following

- Risk Overview
- The Potential Impact on agency support staff

SSA processed with the deployment but had to roll back the initial deployment and issue an apology.

However

This led to the funding of a Nationwide Ethnographic Study to understand customer attitudes on Authentication



Research and Analysis National Ethnographic Study

Challenge

Customer Obsession

National Study Findings

- There is no silver bullet for the authentication of SSA customers
- The customer base is too diverse to be authenticated by one method
- All customers don't have the same access to web connected technologies

Guidance

- Provide multiple Authentication methods that mitigate the constraints of different specific user segments.
- Provide reassurance, contextual help, off-ramps and U Turns to help customers navigate the SSA Authentication process.



Research and Analysis National Ethnographic Study

Customer Obsession

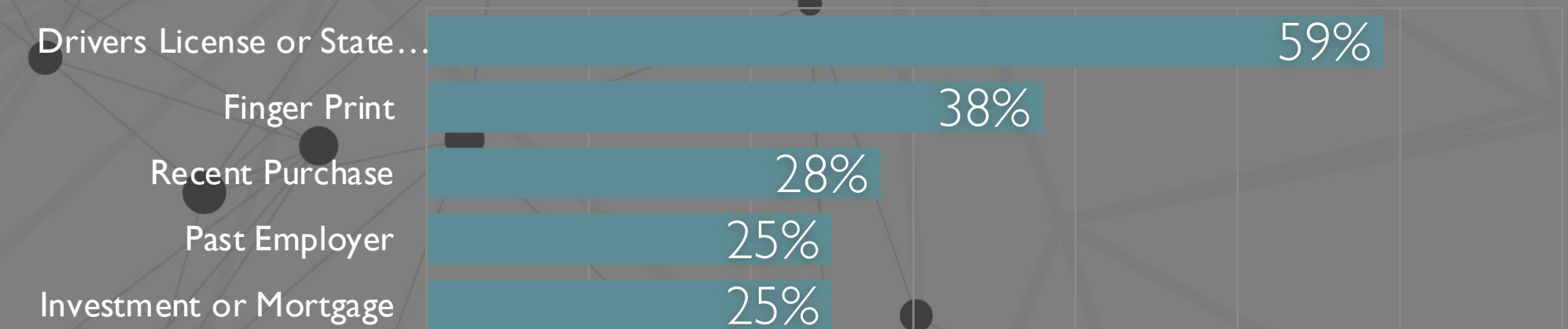
National Study Findings

- There is no silver bullet for the authentication of SSA customers
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- All customers don't have the same access to web connected technologies

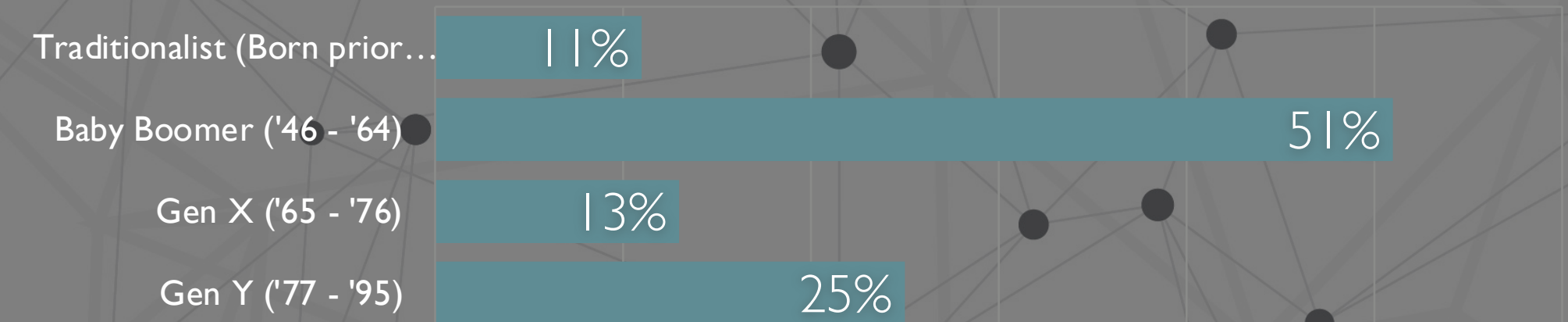
Guidance

- Provide multiple Authentication methods that mitigate the constraints of different specific user segments.
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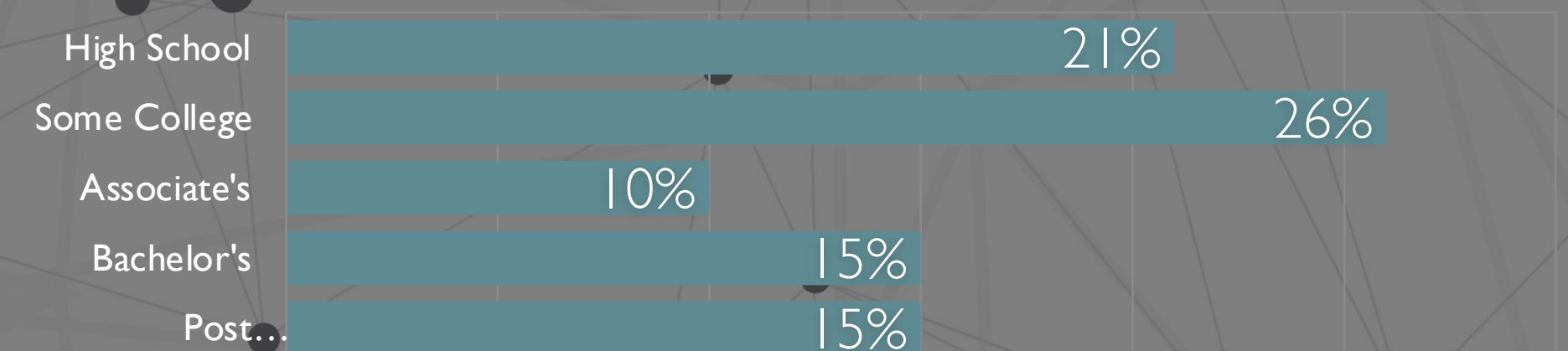
Methods customers indicated they have used to prove their identities



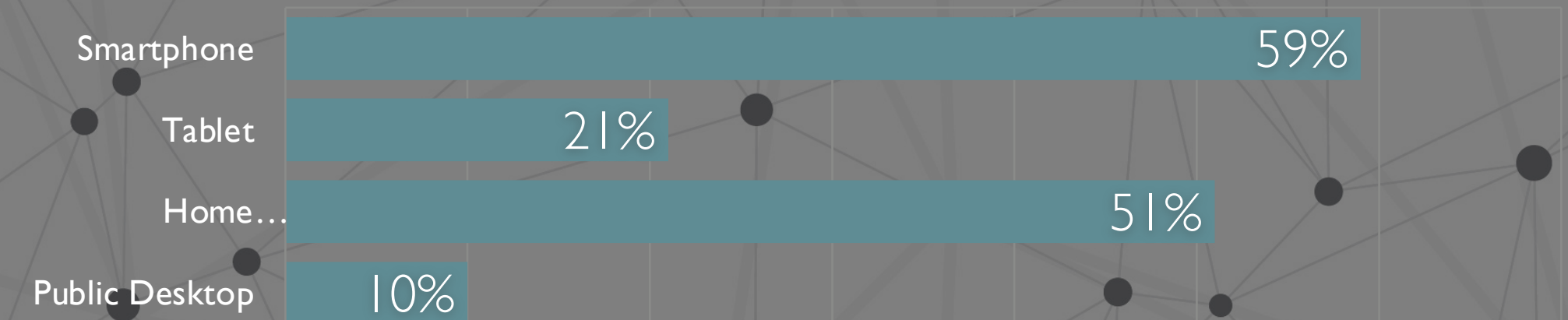
Customer Age Groups



Customer Education Levels



Customer Device Access



386 Customers

Research and Analysis

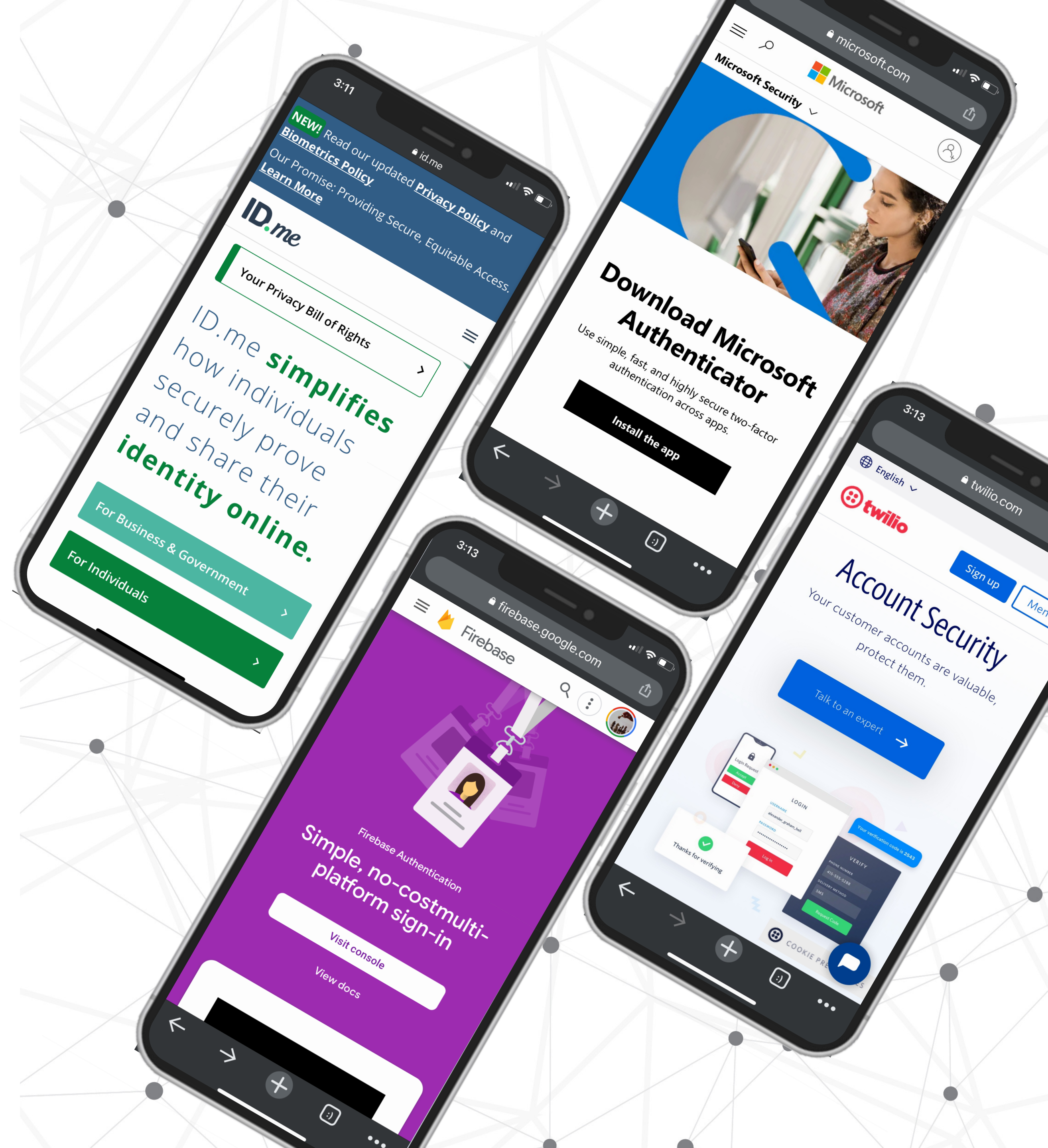
Competitive Analysis of Authentication Providers

Invent and Simplify

An Analysis of COTS Authentication solutions was done based on the following criteria.

- On-site hosting
- Can Integrate with Equifax Credit Verification
- Has document Verifications Services
- Can integrate with other Authentication Systems
- Can potentially integrate Biometric Authentication
- UX/UI Flexibility

[ID.me](https://id.me) was eventually selected as the provider



Research and Analysis

Work Flow Mapping

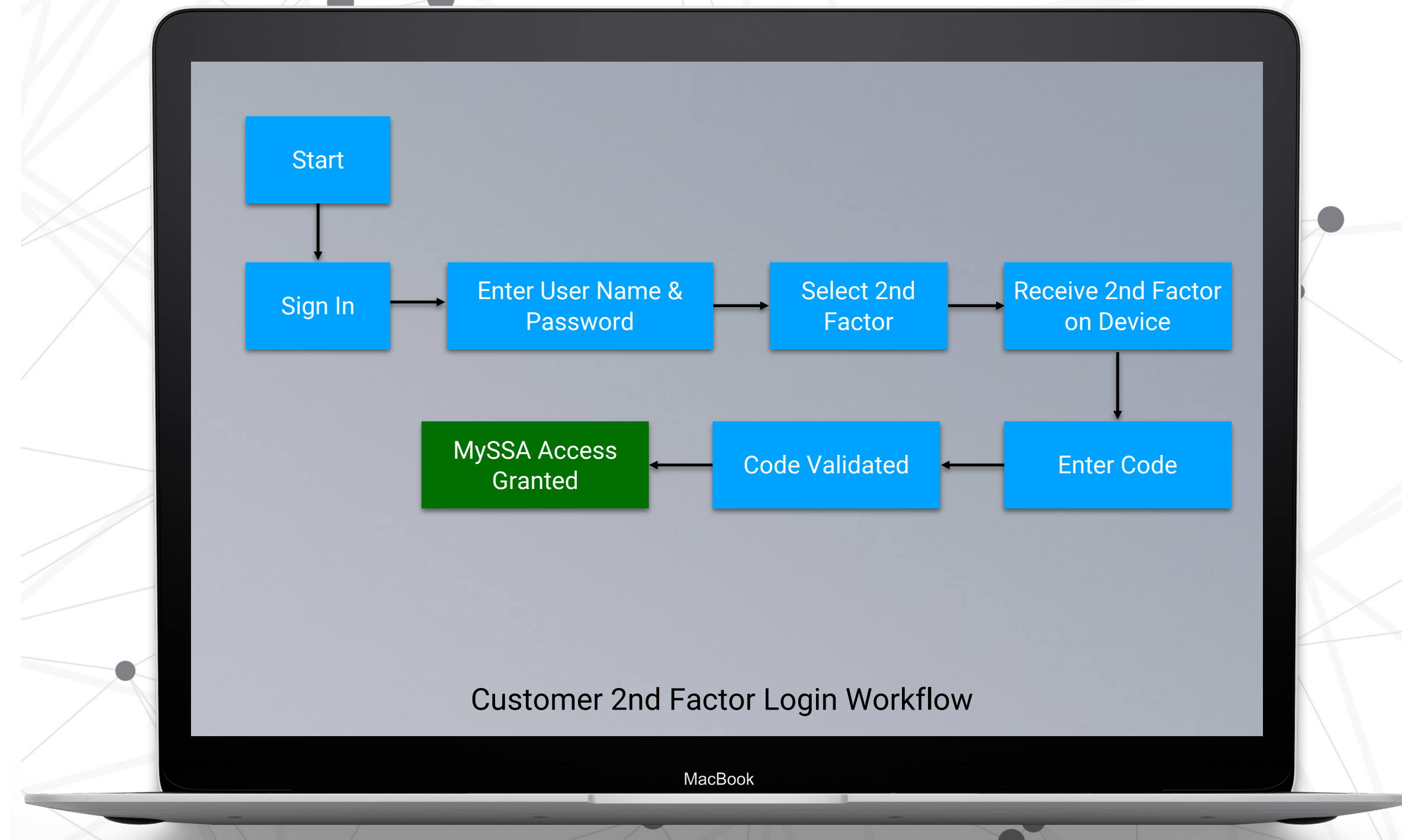
Dive Deep

Every “To Be” Workflow was mapped and signed off by the Product Owner Team before prototyping began. These included the following

- Account Login and
- Account Creation
 - Automated Information Entry
 - Manual Information Entry
- Error Paths
 - Incorrect Username/Password
 - Failed Authentication
 - Failed Validation

Recovery

- Resend Access Codes
- 2nd Chance Credit Questions



03

Iterative Prototyping

Prototypes were built user SSA's Design Library, lovingly known as the **Universal Experience Framework (UEF)**. The prototyping process was:

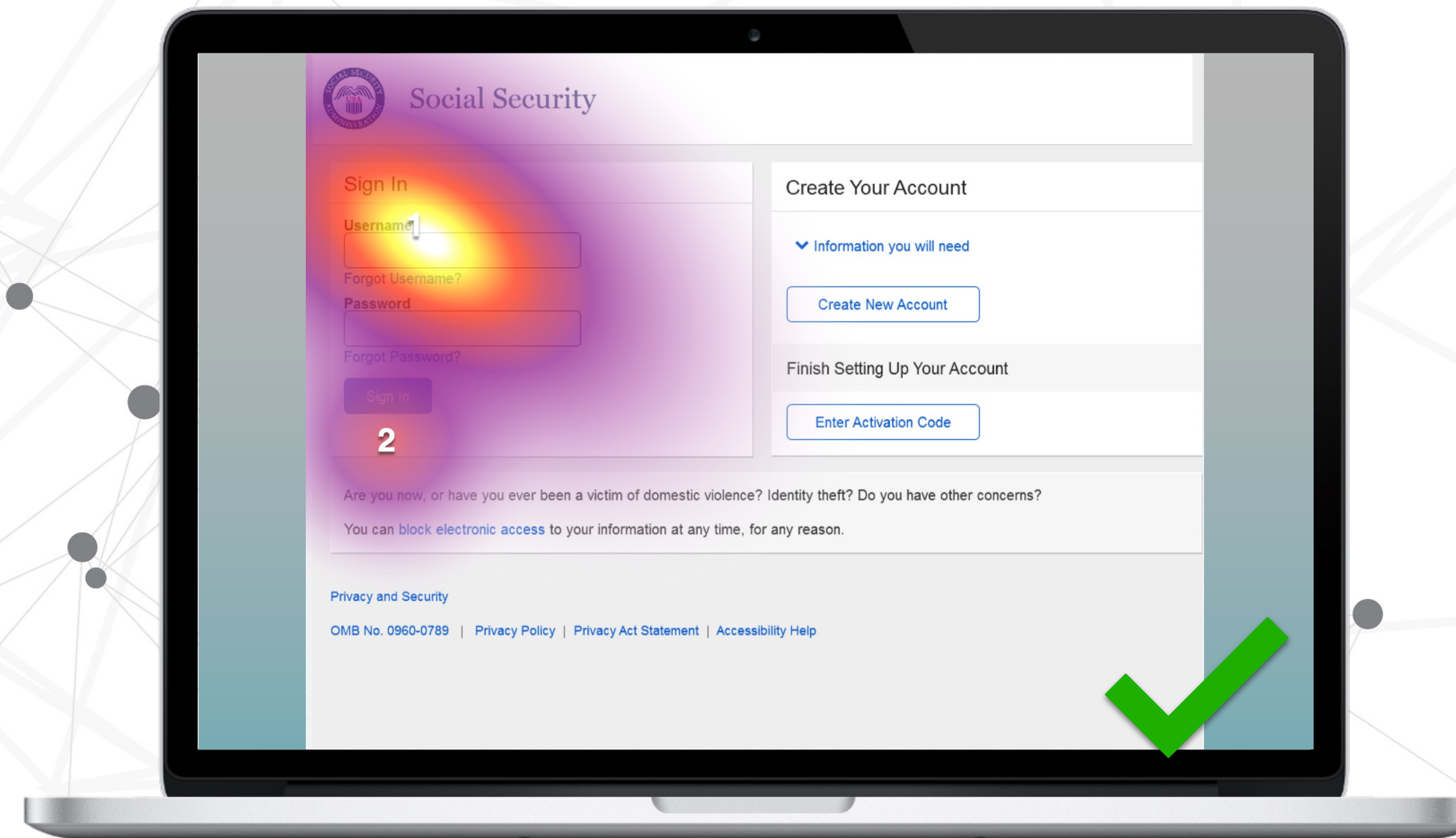
- Iterative and Integrated with Periodic Testing and Review
- Agile with delivery 2 Sprints ahead of Development Needs

Iterative Prototyping Iterations - Login

Customer Obsession

Using a **Tobii Eye Tracker** I determine what interface was the most efficient for customers considering that 98% of Visitors already have a MySSA Account.

- When not in the “Top Right”, users scanned for login location
- Mouse tracking showed less movement was required for users to initiate the login process



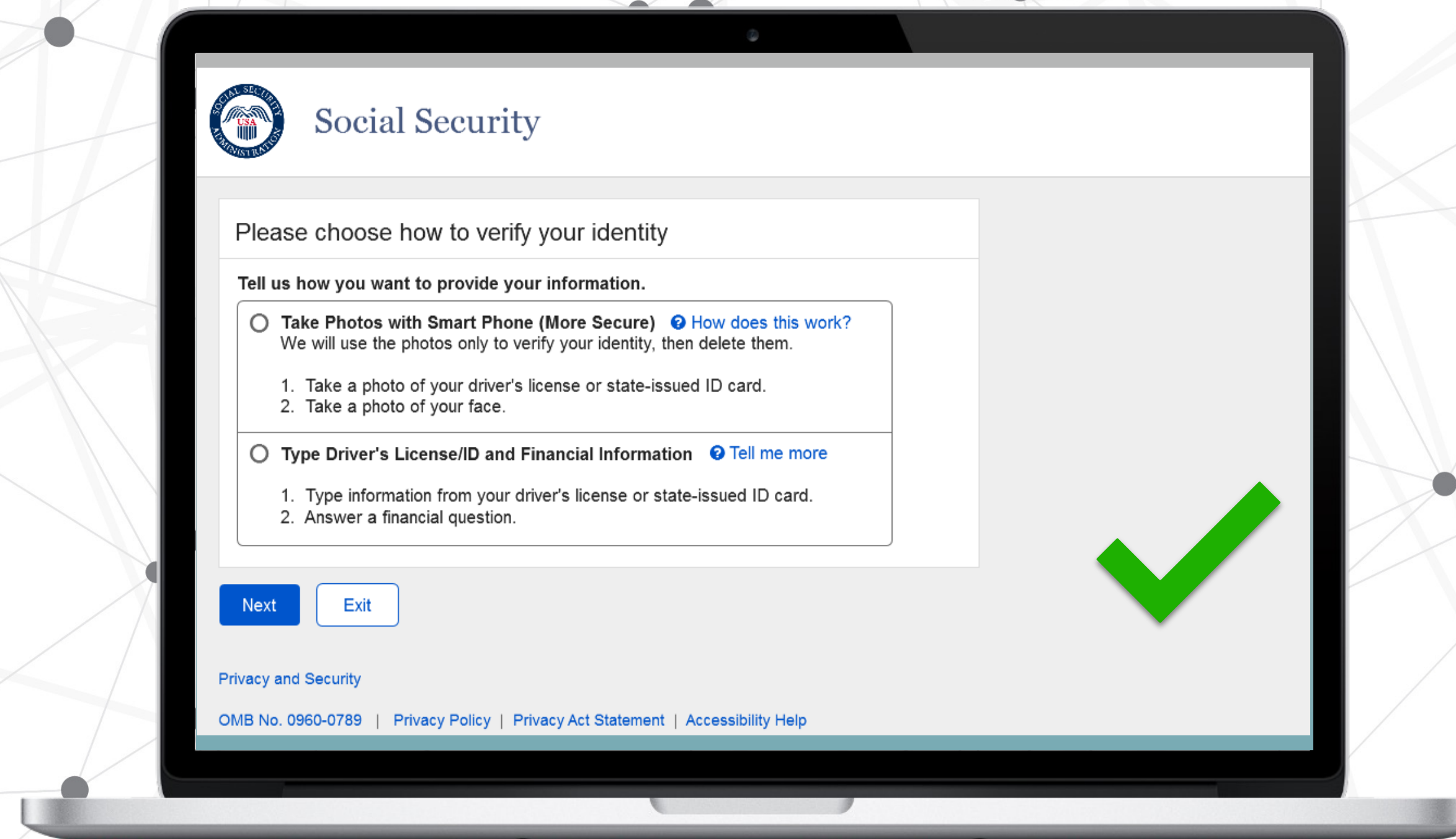
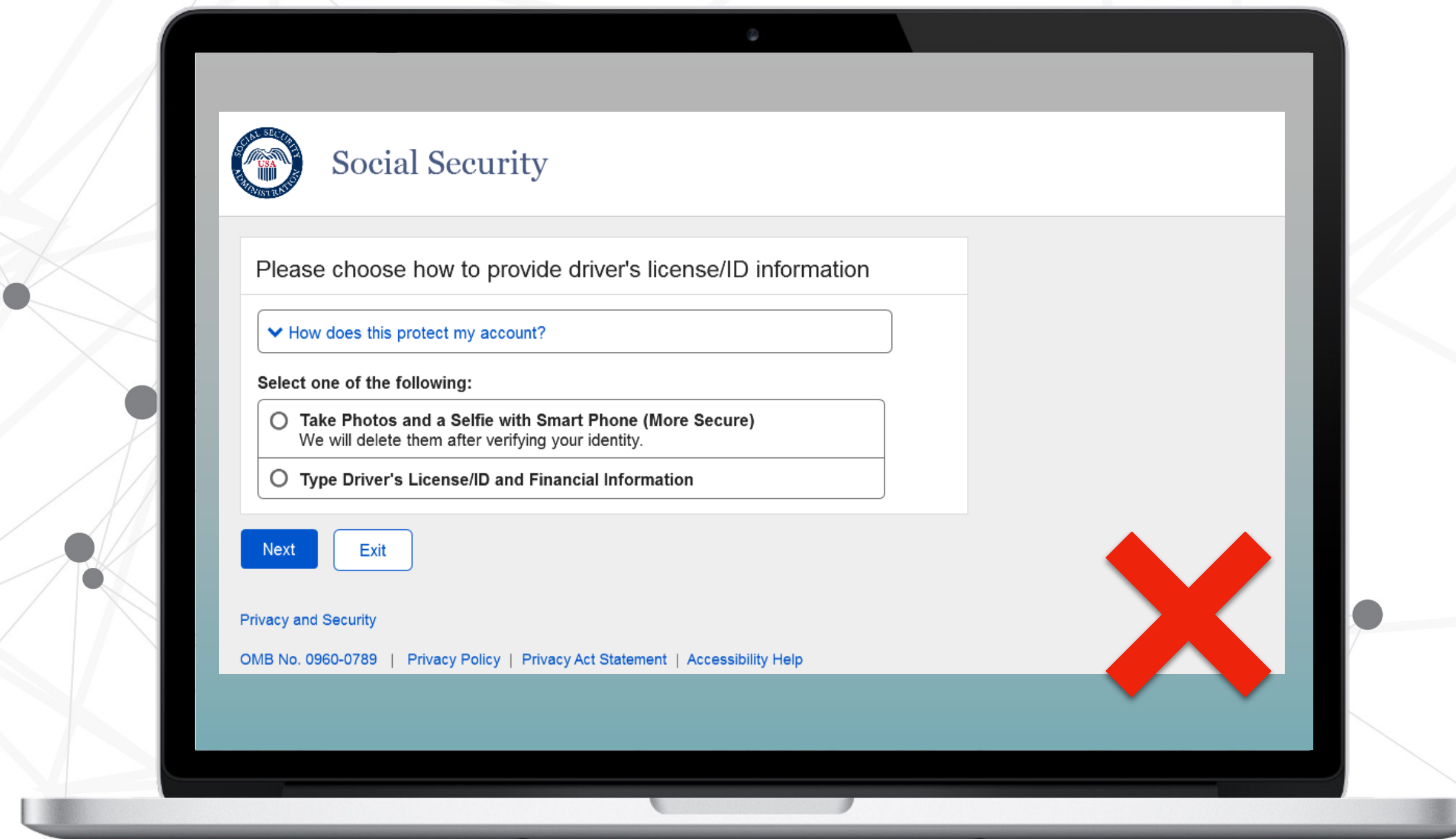
Iterative Prototyping Iterations - Tool Tips

Customer Obsession

We wanted to determine how customers preferred to access help in the form of tool tips.

- Customers want help specific to the challenge at hand.
- Customers did not want to read through unneeded information to get their answers.

Option 2 was selected





Iterative Prototyping

Deliver Results



Social Security

Create Your Account

Information you will need

Create New Account

Finish Setting Up Your Account

Enter Activation Code

Sign In

Username

Forgot Username?

Password

Forgot Password?

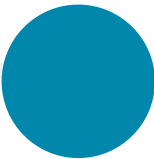
Sign In

Are you now, or have you ever been a victim of domestic violence? Identity theft? Do you have other concerns?

You can [block electronic access](#) to your information at any time, for any reason.

Privacy and Security

OMB No. 0960-0789 | [Privacy Policy](#) | [Privacy Act Statement](#) | [Accessibility Help](#)



Login and Account Creation



Social Security

Terms of Service

You must be able to verify some information about yourself and:

• Have a valid email address;

• Have a Social Security number;

• Have a U.S. mailing address; and

• Be at least 18 years of age.

You can only create an account using your own personal information and for your own exclusive use. You cannot create an account on behalf of another person or using another person's information or identity, even if you have that person's written permission.

For example, you cannot create an account for another person:

• With whom you have a business relationship;

• For whom you are an appointed representative; or

• For whom you are a representative payee.

Only you can use the account that you create with us. You can never share the use of your account with anyone else under any circumstances. You can never use another person's account.

What will we do with your information?

We use the information you give us to verify your identity against our records. We also use an external [Identity Services Provider](#) to verify your information against their records. We do not share your Social Security number with them, and they keep your information only for the period of time permitted by federal laws, regulations, or guidelines.

When you make a verification request to establish your account, our [Identity Services Provider](#) may use information from your credit report to help verify your identity. As a result, you may see a "soft" inquiry entry on your credit report with the [Identity Services Provider](#), indicating that the Social Security Administration made an inquiry at your request and the date of that request. Soft inquiries do not affect your credit score, and you do not incur any charges related to them. Soft inquiries are displayed in the version of the credit report provided to a consumer and are not reported to lenders. Soft inquiries will not appear on your credit report from other providers. Soft inquiries are generally removed from your credit report after 12 months. Once you have registered for an online account, you will not generate additional soft inquiries by logging in to access our services.

What happens if you provide false information or misuse this service?

You may be subject to criminal or civil penalties, or both, if you provide false or misleading statements to sign in or create an account or engage in unauthorized use of this service.

Who is responsible if the device you are using is not adequately safeguarded?

You accept that the responsibility to properly protect any information provided to you by Social Security is yours and that you are the responsible party should any information on or from your computer or other device be improperly disclosed. You agree that Social Security is not responsible for the improper disclosure of any information that Social Security has provided to you, whether due to your own negligence or the wrongful acts of others.

Social Security is Going "Green"

When you create a **my** Social Security account, you will no longer receive a paper Social Security *Statement* in the mail. You will, however, receive an email reminder — which contains no personal information — approximately three months before your birthday, to remind you to review your *Statement* online.

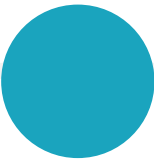
If you need a *Statement* by mail, please [follow these instructions](#).

With your **my** Social Security account, you can immediately view, download, or print your *Statement*. Your online Statement contains the most up-to-date information in our records about your earnings and benefit.

☐ I agree to the Terms of Service.

Next

Exit



Terms of Service



Tell us who you are

Your Name

As shown on your Social Security card.

First M.I. Last Suffix

Social Security Number (SSN)

[SHOW SSN](#)

Example: 000-00-0000

Date of Birth

Month Day Year

Home Address

We cannot accept a business address unless it is also the place where you live. The information you provide here will not update any information we have on file.

Street Address Apartment, suite, unit, building, floor, etc.

City/Town State/Territory ZIP Code

Is this the address on your driver's license/state ID?

☐ Yes

☐ No

☐ Don't have driver's license/state ID

Cell Phone

[I don't have a phone number.](#)

We only recommend a cell phone to help us verify your identity.

10-digit Number

Other Phone

This could help us verify your identity.

10-digit Number

Email Address

We need this to communicate with you about your online account.

Confirm Email Address

Emails must match

[Next](#)

[Back](#)



Please choose how to verify your identity

Tell us how you want to provide your information.

- ☐ **Take Photos with Smart Phone (More Secure)** [How does this work?](#)
We will use the photos only to verify your identity, then delete them.
1. Take a photo of your driver's license or state-issued ID card.
 2. Take a photo of your face.
- ☐ **Type Driver's License/ID and Financial Information** [Tell me more](#)
1. Type information from your driver's license or state-issued ID card.
 2. Answer a financial question.

[Next](#)

[Exit](#)

[Privacy and Security](#)

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How photo capture works

- Step 1. Get a text.
Step 2. Click the link.
Step 3. Take photos.
Step 4. Return to this window.

If you select the *Continue* button below, you will get a text with a link to a third-party, non-government webpage hosted by Social Security's contractor, Equifax, for online identity proofing and authentication.

You will need to provide information about yourself to facilitate the authentication. Equifax is responsible for protecting your information in accordance with federal law and Social Security's privacy regulations.

While Equifax may have separate terms of use and privacy policies that generally apply to users of its services, those terms are inapplicable to Social Security's users. Please refer to Social Security's [privacy policy](#) and [privacy statement](#) for the uses associated with Social Security's collection and maintenance of your information.

[Continue](#)

[Back](#)

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Profile Info

Select Validation

Photo Capture Preamble



Social Security

Provide Information to Equifax

You are about to exit the Social Security Administration's website. You will be returned to our website to finish creating your account.

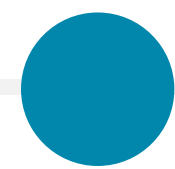
If you select the *Continue to Equifax* button below, we will redirect you to a third-party webpage, for online identity proofing and authentication. Equifax is not affiliated with the United States government. This means it is not within our control and may not follow the same privacy, security, or accessibility policies. Once you exit www.socialsecurity.gov and visit Equifax's website, you are subject to the policies of their website. The Social Security Administration is not responsible for information provided to Equifax. More information about Equifax's privacy and terms are available [here](#).

Continue to Equifax

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Equifax Intro



Social Security

How photo capture works [? Tell me more](#)

- Step 1. Get a text. (Your rates still apply.)
- Step 2. Click the link.
- Step 3. Take photos.
- Step 4. Return to this window.

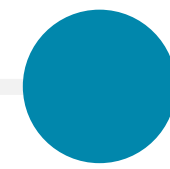
When you select Continue, Social Security's identity services provider, Equifax, will send a text to you. Equifax is bound by Social Security's privacy policy and privacy act statement.

Continue

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Phone Send Off



Social Security

! Please do not close this window.

After taking your driver's license/ID photos and selfie, you will need to finish setting up your account.

Please check your cell phone

You should receive a text with a link to start the photo capture.

[▼ Having Trouble?](#)

Have you provided photos of your driver's license/ID and a selfie?
Please answer after returning from the photo capture.

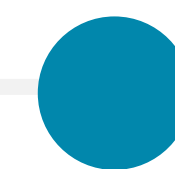
☐ Yes

☐ No

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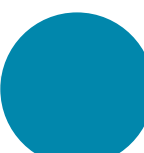
Baby Sitting



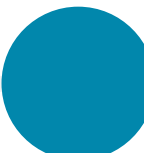
Validation Start



Terms



License Photo



Take Selfie



Verification Assessment



Social Security

Get your activation code

An activation code helps us verify your identity, and improves the security of your account.

How do you want to receive your activation code?

- ☐ Text Message
(*) (*) - 1111
Your rates still apply.
- ☐ Email
us*****@email.com
- ☐ Mail
5-10 days

Next

Exit

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Get Activation Code



Social Security

i We sent a text message to (*) (*) - 1111.

Please allow up to 2 minutes for the activation code to arrive.

The activation code will **expire** after 10 minutes from the time of your request.

An activation code helps us verify your identity, and improves the security of your account.

Please enter your activation code

[^ Having trouble?](#)

- Check your reception and text messaging.
- You may need to move to a location where your phone can receive a text message.
- Please check that your phone can receive text messages.

Still having trouble?

We can [send a new activation code](#).

Enter the activation code you just received.

Submit Activation Code

Exit

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Enter Activation Code



Social Security

Please create your account details

Username

Cannot be your name or Social Security number (SSN) and must be:

8-20 characters

Available

Password

Must:

Begin with a letter or number

Contain 8-64 characters

Contain upper & lowercase letters

Contain numbers

Contain symbols (! @ # \$ % ^ & *)

Please create your password reset questions

[? Why?](#)

Question 1

Answer 1

Question 2

Answer 2

Question 3

Answer 3

Next

Exit

Setting Up Username and Password



Social Security



Congratulations! You have successfully set up your *my* Social Security account.

In the future, you will use two steps to sign in to your account.

Step 1: Enter your **username** and **password**.

Step 2: Enter the **security code** that we will send you.

You can add or change the ways to receive security codes on the Security Settings tab on the *my* Social Security home page.

How can I protect my information?

Please keep your information safe. Do not share your password with anyone.

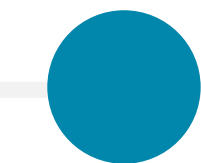
[? Tips for protecting your identity.](#)

Next

Exit

[Privacy and Security](#)

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Success



my Social Security

Mindy Smith | [Sign Out](#)

[My Home](#) | [Help Center](#) | [Security Settings](#) | [Message Center](#)

Overview

Welcome, Mindy! You last signed in on January 1, 2018 at 10:03AM EST.

You have **24 new messages!**

You can now add additional security to your account so you can use your cell to confirm every login attempt into you SSA account. [Click here to find out how.](#)

Social Security Statement

A Message from the Acting Commissioner:

[▼ Your Social Security Statement ...](#)

Estimated Benefits at Full Retirement Age (67): **Not applicable**

Last Reported Earnings: **\$0 in 2018** [View Earnings Record](#)

Benefits & Payments

You are receiving: **Social Security (Retirement)** [View Benefit Details](#)

Your next payment is: **\$230.20 on May 26, 2019** [View Payment History](#)

[Get a Benefit Verification Letter](#)

Need proof that you applied for Social Security benefits? Here's your official letter.

Report Wages

[Submit Pay Stub Information](#)

If you are a representative payee for someone receiving Social Security Disability, you may report their wages online.

Social Security Card Replacement

If you are not a U.S. citizen, you can request a [replacement card](#) through your [local office](#) or by mail.

If you are a U.S. citizen, please notify your local office.

Overview

[Benefit & Payment Details](#)

[Earnings Record](#)

[Replacement Documents](#)

[My Profile](#)



My SSA Home Page

04

Deployment and Beyond

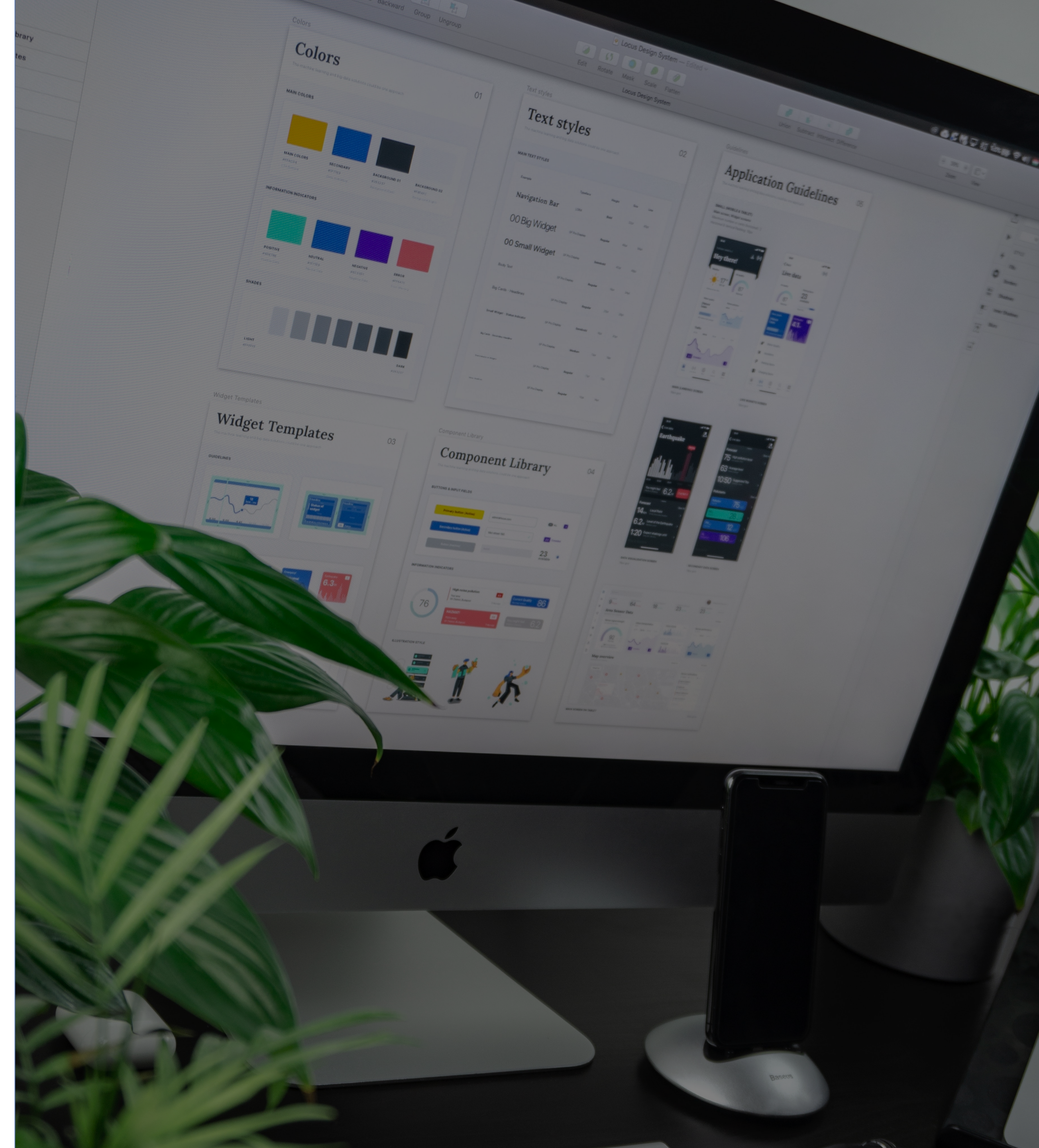
Passing over the screen package to development is not the end. **Sumatative Testing** to validate design decisions and provide guidance for update is essential.

Deployment and Beyond Release

Deliver Results

Screen packages were produced periodically and delivered to the development team. They contained the following

1. High fidelity Screens designs
2. Annotations to explain key interactions
3. Workflows where needed
4. Hidden Menu Contents



Deployment and Beyond **Post Release**

Deliver Results

Customer Obsession

After Release, **Analytic Research** was done the validate the design and architecture decisions made. The following items were investigated

1. Account Creation Success Rate
2. Account Login Login Success Rate
3. External Validation Success Rate
4. General Customer Sentiment via ForeSee

82%

Account Creation Success Rate

91.9%

Account Login Login Success Rate

87%

External Validation Success Rate

84.1% Positive

Online Customer Sentiment via ForeSee



Outcome

Successfully Provided the UX Artifacts and Guidance to inform the implementation of
Multi-Factor Authentication to secure access to 50 million Customer Accounts and met the goals of the
Federal Governments IT Modernization Effort

